

5  
333.91  
W3ecp  
1970  
Vol. II

Preliminary Feasibility Study for East  
Central Water Conservancy District

CHAPTER III

Identification of Potentially Irrigable  
Land, Land Ownership & Current Land Use



OFFICES  
25 E. MENDENHALL  
PHONE 406 587-4461

MAILING ADDRESS  
TAP INC.  
P.O. BOX 471



Digitized by the Internet Archive  
in 2013

<http://archive.org/details/preliminaryfeasi63tapi>

1978

MONTANA STATE LIBRARY  
930 E Lyndale Ave.  
Helena, Montana 59601

Preliminary Feasibility Study for East  
Central Water Conservancy District

CHAPTER III

Identification of Potentially Irrigable  
Land, Land Ownership & Current Land Use

Submitted To:

State of Montana  
State Water Resources Board  
Helena, Montana 59601

Submitted By:

T.A.P., Incorporated  
P. O. Box 471  
Bozeman, Montana 59715

November 11, 1970

PLEASE RETURN



## CHAPTER III

### IDENTIFICATION OF POTENTIALLY IRRIGABLE LAND, LAND USE AND CURRENT LAND OWNERSHIP

#### A. DELINEATION OF THE STUDY AREA

The study area for which all materials have been assembled in this preliminary feasibility survey includes all of Garfield and McCone Counties and the western portions of Dawson and Richland Counties.

The study area is bounded on the north from Range 30E. to Range 55E. along the Missouri River. The Missouri River and Fort Peck Reservoir also serve as the northern boundaries for Garfield, McCone and Richland Counties. The northern boundary of the study area is exactly the boundaries of these three counties with only a portion of Richland County included. This northern boundary is indeed very logical because it serves as the terminus for all of the major drainage in the entire study area.

The study area is bounded on the west by the Musselshell River, which also serves as the western boundary of Garfield County. Approximately one-fourth of the land area of Garfield County drains toward the Musselshell River rather than toward the northern boundary of the Missouri River.

The eastern boundary of the study area runs along the top of the ridge in Dawson and Richland Counties which divides the drainage in these two counties between the Missouri and

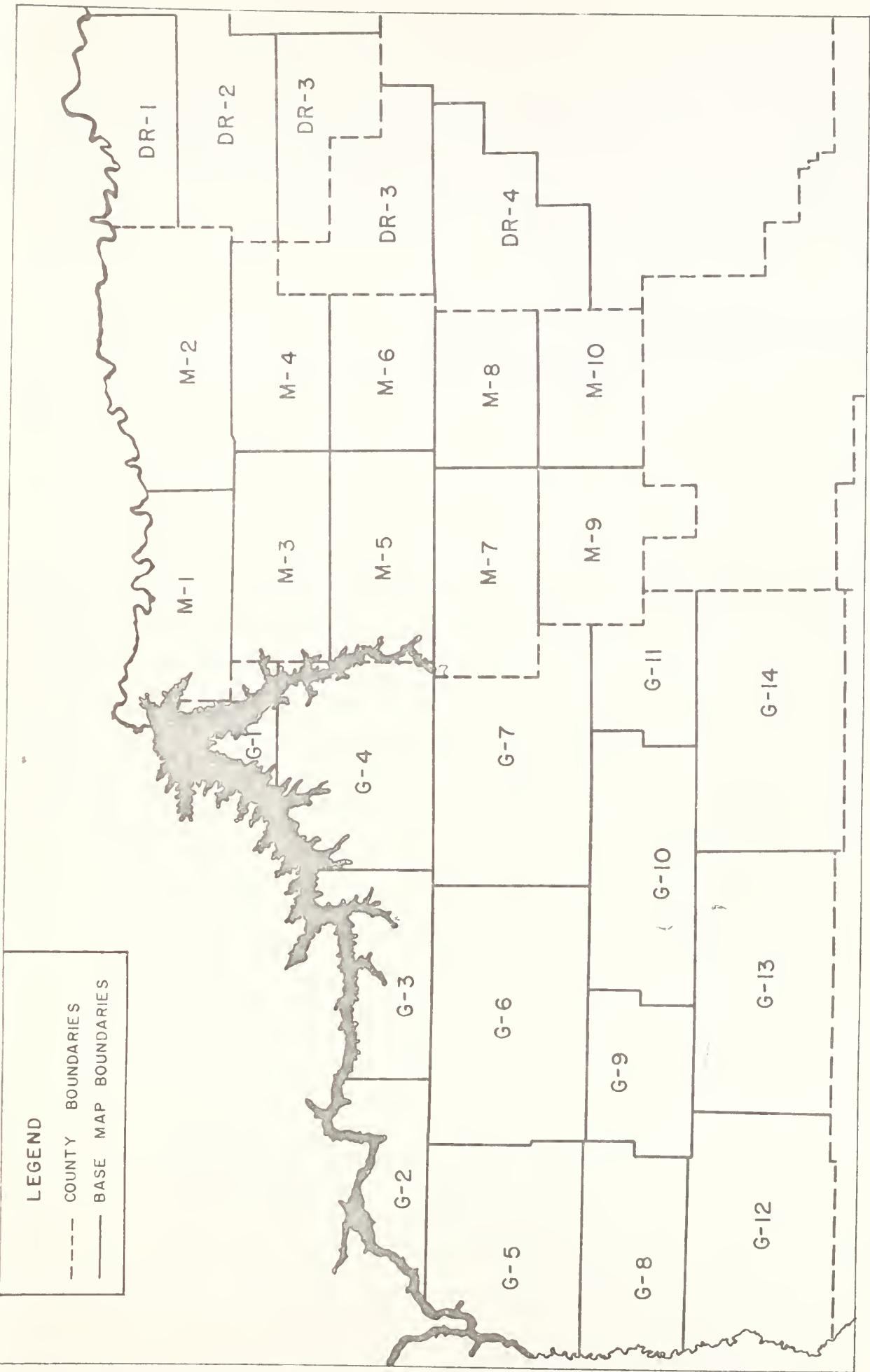


Yellowstone Rivers. The western parts of Dawson and Richland drain into the Missouri River via the Redwater River which is one of the primary drainages in the study area. The legal description of the boundary in Dawson County begins in T. 17N. R. 51E. and generally follows the ridge line toward a point in Richland County in T. 28N. - R. 51E. There are 17 townships included in the study area from Dawson County and 22 townships in Richland County. Detailed description or identification of the exact boundaries can be found in Figure III-1 in this chapter of the report.

The southern boundary of the study area consists of the southern boundaries of Garfield and McCone Counties. Practically all of McCone and Garfield Counties drain to the north through the major drainages of the Big Dry and Little Dry Creeks in Garfield County and the Redwater River in McCone County. There are only very minor portions of either of these counties that do not drain toward the north or northeast via these major tributaries into the Missouri. The western portion of Garfield County does drain to the west and north into the Musselshell River as mentioned earlier.

In summary, the study area boundaries are 1) the Missouri River on the north, 2) the Musselshell River on the west, 3) the southern boundaries of Garfield and McCone Counties and 4) the western portions of Dawson and Richland Counties outside of the Yellowstone drainage, which drain into the Redwater River. Designation of these study area boundaries





KEY MAP OF SUB-AREA LOCATIONS

Figure III-1

Scale: 1:1,000,000  
1 inch equals approx. 16 mi



does not imply that they are the recommended conservancy district boundaries. They only serve to describe the study area as studied in detail in this preliminary feasibility report.

B. METHODOLOGY FOR IDENTIFICATION OF LAND CHARACTERISTICS --  
SOILS -- LAND USE -- LAND OWNERSHIP

Soils

A preliminary reconnaissance survey was conducted by the research staff of this study to determine quantity, location and class of potentially irrigable land in the proposed conservancy district. We want to emphasize that this is a report of a reconnaissance survey and that the feasibility of actual irrigation development must be based on a detailed soils study as well as other relevant factors. As results are from a reconnaissance survey, there is little doubt that some potentially irrigable areas were omitted and some non-irrigable areas were included. The general approach in this reconnaissance survey can be described by the word "conservative". Without a detailed survey the exact quantity and type of irrigable land cannot be designated. The history of developed irrigation projects, world wide, dictates a conservative approach at this stage. Within this conservative frame work the estimate of potentially irrigable lands is subject to an error of up to plus or minus 15 percent, and it is much more likely to be low rather than high.



The classification of lands as non-irrigable or irrigable, and the classification within the irrigable areas were based on criteria as report by Mr. Glen Smith, Soil Scientist of the Montana Water Resources Board.<sup>1</sup>

As pointed out by Smith and Cawlfieeld<sup>2</sup>, potentially irrigable land must have soil, topography and drainage features which will withstand a sustained irrigated agriculture. On the basis of these factors, the land was classified as Class 1, 2 or 3 irrigable or non-irrigable. Class 1 lands have a potentially high productivity level under irrigation, Class 2 an intermediate level and Class 3 lands have the lowest acceptable productivity level under irrigation. A deficiency in any soil, topographical or drainage feature may lower the class of a land area one or more classes.

Use of this classification system does not provide for consideration of other factors which may ultimately prevent irrigation of a land area. For example, lands which occur on high, broad ridges between drainage systems may meet the soil, topographical and drainage criteria for irrigability, but it may be completely impractical to lift water to these areas. This is particularly important if the land area is limited in

<sup>1</sup> Land Classification Standards & Procedures; Missouri Basin, Montana. Glen R. Smith, Soil Scientist, Montana Water Resources Board, October 21, 1968.

<sup>2</sup> In Water Resources Survey, Glacier County, Montana Water Resources Board, Helena, Montana. September, 1969, p. 15.



extent and rather isolated or if it is Class 3 land. Areas listed in this report as potentially irrigable include such lands that may be eliminated eventually by engineering, economic or other limitations.

The actual land classification was conducted through a combination of on-site investigations (at times accompanied by Soil Conservation personnel from the areas), intensive use of Soil Conservation Service classification maps for those areas that have been surveyed, published reconnaissance soil surveys of Richland and McCone Counties<sup>3</sup>, extensive use of maps prepared by Mr. Dave R. CawlfieId, Consulting Soil Scientist, Montana Water Resources Board and consultation with S.C.S. personnel in the field. These included Mr. Douglas Campbell of Garfield County, Mr. Joe Icenhower of McCone County, Mr. Pedro Pescador of Richland County and Mr. Donald Anderson of Dawson County. Much of the recent soil survey in the area of the Redwater Creek drainage which passes through Dawson County had been done by Mr. Pescador. He was able to give us first-hand briefing on the soils encountered, their characteristics and related information. He also accompanied us on a tour of the entire drainage areas of the Redwater, Prairie Elk, McGuire and Nelson Creeks and their major tribu-

<sup>3</sup> Soils of McCone County, Soil Reconnaissance of Montana, Preliminary Report; Montana State College, Bulletin 514, October, 1955. Soils of Richland County, Soil Reconnaissance of Montana, Preliminary Report. Montana State College, Bulletin 515, November, 1955.



taries. In addition other S.C.S. personnel were consulted, and information concerning the agricultural situation was obtained from County Cooperative Extension agents especially Mr. Robert G. Brastrup, McCone County.

Land Use

The contact prints or aerial photos were available through the western office of the Agricultural Stabilization and Conservation Service in Denver for the entire study area. These aerial photos were obtained from the A.S.C.S. and assembled for use by the research staff for the entire study area. Larger scale aerial photos were obtained and used for all areas within the study area where potentially irrigable lands were located. These aerial photos were also used to directly assist in the identification of present land use within the study area.

Present land use maps were prepared for each township in the study area on a scale of 2 inches to the mile. This was accomplished in very close cooperation with the A.S.C.S and S.C.S. offices in the respective counties. Many of the acreages as to present cropland were also obtained directly from the A.S.C.S. Total cropland acreages were determined directly from these materials and data sources and is defined as 1) land under crop production, 2) land in summer fallow, 3) diverted cropland which is idle or in various agricultural



programs, 4) cultivated land for hay production and 5) small acreages of presently irrigated land. These detailed land use maps, as prepared for use in this study, are on file and available in the offices of T.A.P., Inc., Bozeman, Montana.

#### Land Ownership

Present land ownership maps were also prepared for all sections of the study area. Lands in terms of ownership were classified into several categories as follows: 1) federal ownership in wildlife refuges, 2) federal ownership other than wildlife refuges, 3) land in state ownership and 4) fee title land of the Burlington-Northern Railway Company and 5) all other private ownership.

All of the material on state and federal ownership was obtained from the Bureau of Land Management unit maps of a scale of one-half inch to the mile. These maps were current as of the preparation date of 1964. For the purpose of this study it was assumed that the federal and state ownership had not changed since 1964, but in certain areas this would need to be examined further in continued detailed investigations.

The Burlington-Northern Railway Company supplied excellent cooperation in relationship to this study and also supplied a map of the study area delineating the ownership of the railroad lands in the study area. All of the detailed maps showing land use in this study, which will be referred to later, show the land for which the Burlington-Northern Railroad has



fee title. This data was current as of 1955, and it is anticipated that only minor change has occurred in this ownership since that time. The maps supplied to the research staff also contained other land classifications held by the Burlington-Northern Railroad for which all or part of the mineral rights had been retained by the Burlington-Northern with the actual land being transferred to other private ownership. The study area does contain very large acreages of property for which the mineral rights are retained by the Burlington-Northern Railroad, but for which the land has been sold. This has not been identified on the land use maps, but would be important to industrial development relative to minerals and coal which is discussed in detail later in the report.

#### C. SYSTEM OF PRESENTATION

##### Sub-Area Orientation

Figure III-1 is a key map of sub-area locations. This key map illustrates the location of each of the 28 total sub-areas within the study area. Of the total 28 sub-areas, 14 are in Garfield County (G-1, G-2,... G-14), 10 are in McCone County (M-1, M-2,... M-10) and 4 are in Dawson-Richland Counties (DR-1, DR-2, DR-3, DR-4).

##### Detailed Sub-area Maps & Enumerative Data

In general, each of the 28 sub-areas has a set of six



corresponding maps (plates) which are numbered 1, 2, 3, 4, 5 and 6A respectively. See Figure III-2 for a key to all map symbols and colors. Each of these plates, within a given set, provide specific types of information relative to the study area. As an example, a typical complete set for McCone Sub-area 5 (H-5) would include the following plates:

<u>Sub-Area</u>	<u>Plate No.</u>	<u>Plate Title</u>
McCone 5	1	Potentially Irrigable Land-Land Use
"	5 : 2	Potentially Irrigable Land-Land Ownership
"	5 : 3	Alternative Irrigation System-Potentially Irrigable Land
"	5 : 4	Alternative Irrigation System-Land Ownership
"	5 : 5	Alternative Irrigation System-Land Use
"	5 : 6A	Presently Irrigated Land

In other words, each sub-area plate designation consists of:

1. The county name (Garfield, McCone or Dawson-Richland)
2. The sub-area within that county (1, 2,...14)
3. The specific map (plate) number within the set of six maps (1, 2, 3, 4, 5 or 6A).

Next, in terms of order of text presentation, the series of maps (plates) referred to above occur throughout the report where they were considered to be most pertinent. The locations are as follows:

Chapter III - Plates 1, 2

Chapter V - Plate 3, 4, 5

Appendix B - Plates 6A



Figure III-2

KEY TO MAP SYMBOLS

IRRIGATED LAND DESIGNATIONS

Area Containing Potentially Irrigated Land

Present Irrigated Land

LAND USE DESIGNATIONS

Concentrations of Crop Lands

Range Lands

LAND OWNERSHIP DESIGNATIONS

Federal Wildlife Refuge

Federal - Other than Wildlife Refuge

State Owned Lands

Burlington Northern Railroad

Private - Other than Burlington Northern Railroad

IRRIGATION SYSTEMS DESIGNATIONS

Pump Station

Reservoir

Stream Channel Delivery

Pressure Line

Canal

Plan A



Plan B



Plan C



Plan D



DS



As clearly indicated above, Plates 1 and 2 for each of the 28 sub-areas appear in Chapter III (the current chapter) and illustrate the relationship of the potentially irrigable lands to 1) current land use (cropland or rangeland) and 2) current land ownership (state, federal, wildlife refuge, Burlington-Northern and other private). It should be noted that Plates 3, 4 and 5, which appear in Chapter V, exist only when segments of the proposed irrigation system are contained within a given sub-area. Plate 6A exists for each of the 28 sub-areas. A color-coded enumerative data page corresponding to Plate 1 is provided to more precisely enumerate the potentially irrigable acres and land use information contained in Plate 1 for each 28 sub-areas. Cropland and rangeland replacement by township is provided, both in terms of numerical acreages and visually, as is the breakdown by land class. With reference to land classification, only the Class 2 and Class 3 categories are indicated, because of the rather insignificant acreages of Class 1 land within the study area. It should be noted that Class 2 land, as designated in the enumerative data, includes extremely small acreages of Class 1 land.

In terms of detail, the map (plate) and color-coded enumerative data section of this particular chapter provides answers, on a township basis, to two vital questions:

1. What types of current land use is replaced by the potentially irrigable acres?



2. What type of landownership is involved in the potentially irrigable acres?

#### Presently Irrigated Land

The acreage of presently irrigated land within the entire study area is very, very small. It is also obvious that much of the land which is now classified as presently irrigated land is not presently irrigated in the sense that water development is being studied for new irrigation in this report. The vast majority of the acreage that is classified at the present time as presently irrigated land in the study area is land that receives varied degrees of flood irrigation once or at most twice a year in the times of peak runoff in the various drainages. There are some highly productive and well developed irrigated lands along the Missouri River, which forms the northern boundary of the study area, but most of the other land does not fit this category.

The material presented in this study on presently irrigated land was assembled in joint cooperation between the research study team conducting this study and the Montana Water Resources Board. The presently irrigated land identified in McCone, Dawson and Richland Counties in this study area was supplied to the research staff directly by the Montana Water Resources Board. The presently irrigated land identified in Garfield County was assembled by using data of the Montana Water Resources Board as well as primary data collected by the



research staff conducting this preliminary feasibility study.

Detailed maps showing the presently irrigated land are found in Appendix B for each one of the 28 sub-areas described above in Section C of this chapter. All of the plates showing presently irrigated land are plates 6A with the presently irrigated land shown in green. It is easily observed from these maps that the presently irrigated land acreage is not only extremely small but also extremely scattered throughout the study area. It is also fair to say that most of the acreage which is classified or shown as presently irrigated land is irrigated much less intensively than what is commonly regarded as irrigated land.

#### E. DELINEATION OF POTENTIALLY IRRIGABLE LAND & DATA SIGNIFICANCE

##### Geographic and Physiographic Characteristics Contributing to Delineation

The proposed conservancy district is located in the dissected residual plains of east central Montana. The dominant substrata of the area is the Fort Union Formation consisting of clay shale, siltstone and sandstone with local lenses of limestone and numerous lignite beds. The northern portion of the area is underlain in places by the Hell Creek Formation consisting of sandstone, shale clay and mudstone and by the Fox hills Sandstone. The northern part of the area was covered by continental glaciation, but glacial till is not extensive in the area. Only the northeastern corner of McCone County and northwestern part of Richland County are covered with glacial



till. Alluvium, consisting of silt, sand and gravel and including some terrace deposits and glacial drift material has been deposited to various thicknesses along most of the major stream channels of the area.

The area can be categorized generally as rough and broken, sharply rolling, gently rolling or relatively level valley floors. The potentially irrigable areas are found in the latter two categories which comprise a relatively small percentage of the entire land area involved.

The area drains generally in an easterly, northeasterly or north direction. The major drainage basin in the western part of the proposed conservancy district consists of the Big Dry and Little Dry Creeks and their tributaries (Sand Creek, Lone Tree Creek, Smoky Butte Creek, Vale Creek and other smaller creeks). The general direction of drainage is easterly for the major portion of this basin. The Little Dry Creek and the Big Dry Creek, from their confluence to where they drain into Fort Peck Reservoir drain in a northeasterly direction. The eastern portion of the proposed conservancy district is separated from the western by a north-south divide of several hundred feet elevation. Three small streams drain in a northwesterly direction down the western slope of this divide. These streams, McGuire, Nelson and Timber Creeks, are associated with some minor areas of potentially irrigable lands.

The major drainage on the east side of the north-south divide is the Redwater Creek. Numerous contributing creeks



provide the major portion of potentially irrigable lands along their drainages. These include Tisk, Duck, Ash, Tusler, Trail, Dirty, Cotter, Stoney Butte, Antelope, Horse, Lost, Cow and Wolf Creeks. In addition the East Redwater Creek provides the major drainage out of Richland County into the Redwater Creek.

In the northern portion of this eastern section of the proposed conservancy district, the Prairie Elk Creek provides a major drainage. It flows almost directly northward into the Missouri River. It and its major contributing Creeks (The Figure 8, Flying V, Shade and Remutha) have several areas of potentially irrigable lands along their drainages, particularly in the upper reaches of the drainage. Rough, broken lands and excessive salts occur along the lower half of this drainage.

Parent Materials, Salts & Topographic Characteristics Contributing to Delineation

The soils of the area developed from existing geological material. Thus, they are basically from three sources; the residual materials, largely Fort Union and associated formations, the glacial till and the alluvium deposits. Soils of the benches and slopes of the tributaries of the Redwater and, to a lesser extent, the Big and Little Dry Creeks developed from residual materials. Soils of the benches and rolling land in the northern part of McCone and Richland Counties developed from glacial till. Soils of the flood plains along the Big and Little Dry, the Musselshell, the Missouri, the Redwater and



Prairie Elk Creek are fairly recent alluvium. Older alluvium, from glacial lakes, is the parent material for the soils of some of the land above the flood plains of the Big and Little Dry Creeks, the upper regions of the Redwater and Prairie Elk Creek. Since these three parent materials varied appreciably in their original composition, the soils are likewise variable over the area. For instance, soils derived from Fort Union materials might range from sandy loam to clay depending upon the part of the formation making up the parent material. Even greater differences in soils properties can be expected in soils developed in alluvium. For instance, soils of the flood plains along the Missouri often vary from sandy material to Bowdoin clay in a short distance.

In general all of the parent materials contained appreciable quantities of cations (salts), especially sodium, calcium and magnesium. The salts are present in various combinations with a wide range of solubilities. Since the soils formed under conditions of low rainfall the salts have not been completely removed from the soil profile. In some areas of the proposed conservancy district the concentration of salts in the profile is high enough so that the soil is classified as "saline", and the growth of many plants is inhibited.

Irrigation of saline soils poses serious problems and may end in disaster unless the soil is very permeable and deep and/or extreme care is used in development drainage of the project and in subsequent irrigation practices. In fact,



slightly or non-saline soils containing salts can be and often are essentially destroyed by irrigation because the additional water concentrates the salts and deposits them in an adjacent agricultural area. Unfortunately, soils of the areas within the proposed district which contain salts are not especially permeable. Removal of salts by irrigation leaching would be slow and expensive. Moreover, many soils within the proposed district are underlain by slowly permeable clays or nearly impermeable bedrock. This condition is especially dangerous where salts are present. Water will move down through the soil profile, pick up a load of soluble salts and then, upon reaching the slowly permeable layer, it will move downslope until it emerges at the surface. Here it will evaporate, creating a saline seep spot. These seep spots tend to enlarge in area each year and may eventually ruin large expanses of land. Within the proposed district area the possibility of this occurring is greatest in the soils developed from residual bedrock materials. Lands along tributaries of the Big and Little Dry Creeks in Garfield County and those in the lower half of Prairie Elk Drainage in McCone County are probably the most susceptible to this possibility.

In addition to salt concentration, a dominance of sodium, even in non-saline areas, is extremely detrimental to irrigation development. Sodium reacts with clay causing a soil to be essentially impermeable. Much of the area is sodium affected and a considerable amount is sodium dominated.



Delineation of these soils, their exact locations and their extent must be determined through detailed soils studies prior to final development of irrigation in the proposed district.

A brief look at the area, either on-site or with aerial photos, leaves little doubt that topography is the major factor resulting in lands being classified as non-irrigable. Most of the area is far too rough to irrigate by any technique. Furthermore, much of the land classified as irrigable is Class 3 because of topography, limiting irrigation on these areas to sprinkler systems or wild flooding. However, the major factor limiting irrigability of soils within topographically favorable areas is the salt-sodium status and limited profile permeability. Most of the land qualifying as Class 1 from the standpoint of topography lies along the Redwater Creek drainage around Weldon or adjacent to the Missouri River.

#### Fertility Considerations Contributing to Delineation

A survey of the fertility status of soils within the proposed conservancy district was made. This was done by on-site observation of types of vegetation, deficiency symptom appearance of crops, general yield levels obtained over long term and compilation of soil test results from the Montana State University Testing Laboratory.

General appearance of crops in the area leaves little doubt that nitrogen is a major limiting nutrient for crop production. Soil test results verify this observation. Nearly



all soil samples tested from this area are low in organic matter (an indirect indication of the nitrogen supplying power of soils). In addition phosphorus is very deficient in soils of the area. Nearly 75 percent of samples tested were found to be "very low" in their level of phosphorus while only 8 percent of them tested "high" or would be considered to have adequate phosphorus for crop production. The potassium content of these soils appears to be quite adequate with all soils testing medium to high.

Soil test results also verify our conclusions concerning salt and sodium problems within the area. These factors affect not only the soil physical properties and internal water drainage but also the fertility relations of growing crops. About 40 percent of soils tested from Garfield County were found to be salt and/or sodium affected. Twenty-five percent of those tested in McCone County were similarly affected. Furthermore, with few exceptions, the problem soils of Garfield County were found to have both high salt and high sodium while it was more common that the problem soils of McCone County had only one or the other of these undesirable materials.

It is apparent that great care will need to be used in delineating the soils to be irrigated within the area. Detailed drainage investigations should be conducted along with the detailed soil survey. Adequate surface and sub-surface drainage facilities should be included from the beginning as a development cost for detailed studies of irrigation on farm in this



area. Also, on those favorable for irrigation it will be necessary to supply adequate amounts of nutrients through application of fertilizers, particularly nitrogen and phosphorus, if sustained high yields are expected.

#### Soils Descriptions

Soil Conservation Service detailed descriptions of the major soils which are potentially irrigable within the proposed district are included in the appendix of this report. The names given to the soil series are subject to change and are included for identification purposes only. However, a good idea of the profile characteristics of soils in the area can be obtained from a review of these descriptions. Most of the area has not been detail soil surveyed, but our preliminary studies indicate that the soils described here are likely to compose the large majority of irrigable acres. Prior to a detailed soils study, it is not possible to estimate the relative amounts of these soils in the area or to designate the location of the specific soils. The general location, in terms of the type of parent material in which these soils formed, is given below:



TYPE OF PARENT MATERIAL

<u>Residual</u>	<u>Alluvial</u>	<u>Glacial</u>
Bainville	Bowdoin	Marias
Charma	Cherry	Vida
McRae	Havre	
Midway	Lohmiller	
Tullock	Nhill	
	Straw	
		Wolf Point

The Potentially Irrigable Land Identified

Land areas were classified as potentially irrigable and identified on 2 inch to the mile scale maps for each one of the townships in the study area. These outlines of the potentially irrigable lands were each planimetered by land class and individual area to determine the acreage of potentially irrigable land for each township in the study area.

It was impossible to include these 2 inch to the mile scale maps in the report in any meaningful way, and thus this data has been mapped for the report on a scale of 1/2 inch to the mile. The original detailed maps identifying potentially irrigable lands as they were delineated are on file, however, in the offices of T.A.P., Inc., Bozeman, Montana.

The maps in this section of the report which show the areas of potentially irrigable land as they have been delineated in this study are found on Plates 1 and 2 for each one of the 28



sub-areas of the study area.

Each one of the sub-areas has a corresponding map entitled "POTENTIALLY IRRIGABLE LAND - PRESENT LAND USE", which indicates the concentrations of cropland and rangeland in the individual townships and sections of those townships. Cropland is shown on the maps by concentrations of gold dots. In addition, on each Plate 1, there are areas which are designated in yellow, indicating the potentially irrigable land as identified and planimetered from the maps of 2 inch to the mile scale. All of the land area inside these yellow areas is not necessarily potentially irrigable. These areas are intended only to indicate the general location of the acreages of potentially irrigable land. Although a significant amount of the land which is included in any given yellow area may not be potentially irrigable, it will always encompass acreages of potentially irrigable land.

Each one of the 28 sub-areas also has a Plate 2 which relates potentially irrigable land and present land ownership. This ownership has been divided into two classifications of federal ownership, state ownership, Burlington-Northern Railroad ownership and private ownership other than Burlington-Northern Railroad.

It is believed that these detailed maps will be extremely helpful in further study as concerns either 1) the establishment of a conservancy district or 2) the implementation of plans to develop irrigated lands within the study area. As



indicated previously, the material in Plate 1 shows the general location of the potentially irrigable lands in relationship to present cropland and rangeland within the study area. In addition to this Plate 1 for each of the 28 sub-areas, there is a corresponding table of enumerative data.

An example would be that McCone County Plate 6:1 contains detail on six townships. These are T. 21N. and 22N. and R. 47E., 48E. and 49E. Plate 6:1 shows that potentially irrigable land has been identified in each of the six townships. There are, however, significant differences in terms of the amount of potentially irrigable in each of the townships. and also significant differences in terms of the present land use within the townships. This Enumerative Data for McCone County Plate 6:1 identifies in a precise fashion the total cropland as well as the present use of that land which has been classified as potentially irrigable. These tables are designed in three colors for ease of reading. For each township and range there is a classification of Class II and Class III land as well as total potentially irrigable land. In addition, the table shows in red the number of acres of the potentially irrigable land that is presently in cropland and in green the number of acres that are presently in rangeland.

A specific example is T. 22N. - R. 47E. which contains 15,682 acres of cropland at the present time. In addition to that, there has been identified or delineated 974 total potentially irrigable acres within that township with 576 of



those classified as Class III and 398 classified as Class II. The enumerative data shows that of the Class III land, 437 acres are presently in crops and 139 acres are presently being used for range. In total, out of the 974 potentially irrigable acres, 795 are now in cropland with 179 in rangeland. It cannot be over-emphasized that this is extremely useful and beneficial data in terms of assessing the importance or significance of the irrigation of any one of these potentially irrigable areas.

Plate 6:2 for each of the 28 sub-areas shows the present land ownership in relationship to the potentially irrigable land areas. This information is vital in terms of 1) implementation of the study results and 2) carrying the work of this study into either detailed study or other implementation phases. Plate 2 clearly indicates who owns the land which has been identified or classified as potentially irrigable. It is believed that these plates clearly show the data and speak for themselves in terms of interpretation. Therefore, detailed enumerative material has not been supplied in relationship to these maps as was the case with potentially irrigable land and present land use.

This section of the report, including both enumerative data and maps, provides a tremendous data base from which to accomplish any further planning or development of water resources within the study area. The following information is presented in detailed form specifically for the above purpose.



CARFIELD COUNTY ENUMERATIVE DATA ON  
POTENTIALLY IRRIGATED LAND - PRESENT LAND USE  
FOR ALL 14 SUB-AREAS OF GARFIELD COUNTY

Note: In the final report there will be a map or plate  
1 opposite each enumerative data table.

In addition there will also be a set of map  
plates (2) showing Potentially Irrigable Land  
and Present Land Ownership.



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 1:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:		Total
		Class II	Class III	
--	T. 26N - R. 41E	--	--	--
--	T. 25N - R. 40E	--	--	--
--	T. 25N - R. 41E	--	--	--
--	T. 24N - R. 40E	--	--	--
293	T. 24N - R. 41E	--	--	--
--	T. 24N - R. 42E	--	--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 2:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Class II	Class III	Cropland - red Rangeland - green Total
---	T. 22N - R. 32E	---	---	---
---	T. 22N - R. 33E	---	---	---
---	T. 22N - R. 34E	---	---	---
---	T. 21N - R. 30E	---	---	---
---	T. 21N - R. 31E	---	---	---
145	T. 21N - R. 32E	---	---	---
970	T. 21N - R. 33E	---	---	---
1,729	T. 21N - R. 34E	---	---	---



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 3:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:		Total
		Class II	Class III	
--	T. 23N - R. 38E	--	--	--
--	T. 22N - R. 35E	--	--	--
--	T. 22N - R. 36E	--	--	--
--	T. 22N - R. 37E	--	--	--
--	T. 22N - R. 38E	--	--	--
1,114	T. 21N - R. 35E	--	--	--
369	T. 21N - R. 36E	--	--	--
104	T. 21N - R. 37E	--	--	--
--	T. 21N - R. 38E	--	--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 4:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green	Total
Class II	Class III				
--	T. 23N - R. 39E	--	--	--	--
--	T. 23N - R. 40E	--	--	--	--
313	T. 23N - R. 41E	--	--	--	--
344	T. 23N - R. 42E	--	--	--	--
49	T. 22N - R. 39E	--	14	14	14
		--	12	12	12
		--	2	2	2
78	T. 22N - R. 40E	--	--	--	--
439	T. 22N - R. 41E	--	--	--	--
10	T. 22N - R. 42E	--	--	--	--
1,121	T. 21N - R. 39E	667	143	810	
		2	80	82	
		665	63	728	
1,381	T. 21N - R. 40E	608	238	846	
		236	--	236	
		372	238	610	
440	T. 21N - R. 41E	--	--	--	--
45	T. 21N - R. 42E	--	--	--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 5:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:	Cropland - <i>red</i>	Rangeland - <i>green</i>	Total
Class II	Class III				
--	T. 20N - R. 30E	--	--	--	--
286	T. 20N - R. 31E <sup>1</sup>	--	--	--	--
761	T. 20N - R. 32E	--	--	--	--
4,733	T. 20N - R. 33E	--	--	--	--
--	T. 19N - R. 30E	--	998	998	998
		--	--	--	--
		--	998	998	998
--	T. 19N - R. 31E	--	--	--	--
212	T. 19N - R. 32E	--	--	--	--
2,195	T. 19N - R. 33E	--	--	--	--
211	T. 18N - R. 29E <sup>2</sup> & R. 30E	214 -- 214	1,415 40 1,375	40 40	1,629 40 1,589
31	T. 18N - R. 31E	--	--	--	--
932	T. 18N - R. 32E	--	--	--	--
1,165	T. 18N - R. 33E	--	--	--	--

<sup>1</sup> 3.1 inches per mile aerial photographs were unavailable at the time of tabulation for Sections 28-33. The acreage is less than 150 acres, estimated from half inch per mile aerial photo. The estimated acreage is not included since the error will be out of reason.

<sup>2</sup> Acreage includes Sections 1, 12, 13, 24, 25 and 36 from T. 18N - R. 29E and all of T. 18N - R. 30E.



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 6:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:		Cropland	- red
		Class II	Class III	Rangeland	- green
4,186	T. 20N - R. 34E	--	80	80	
		---	---	---	---
		---	80	80	
5,982	T. 20N - R. 35E	363	23	386	
		293	2	295	
		70	21	91	
4,994	T. 20N - R. 36E	175	206	381	
		152	76	228	
		23	130	153	
1,734	T. 20N - R. 37E	--	--	--	
957	T. 20N - R. 38E	--	226	226	
		---	22	22	
		---	204	204	
6,958	T. 19N - R. 34E	253	981	1,234	
		96	297	393	
		157	684	841	
3,514	T. 19N - R. 35E	915	1,149	2,064	
		498	615	1,113	
		417	534	951	
5,269	T. 19N - R. 36E	613	1,290	1,903	
		485	245	730	
		128	1,045	1,173	
3,494	T. 19N - R. 37E	147	800	947	
		92	392	484	
		55	408	463	
1,122	T. 19N - R. 38E	37	464	501	
		11	144	155	
		26	320	346	
1,697	T. 18N - R. 34E	262	919	1,181	
		44	80	124	
		218	839	1,057	
2,495	T. 18N - R. 35E	222	810	1,032	
		140	237	377	
		82	573	655	
1,049	T. 18N - R. 36E	40	901	941	
		---	156	156	
		40	745	785	
1,133	T. 18N - R. 37E	837	--	837	
		53	---	53	
		784	--	784	
890	T. 18N - R. 38E	11	717	728	
		---	57	57	
		11	660	671	



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 7:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:		Total
		Class II	Class III	
875	T. 20N - R. 39E	874 216 658	-- -- --	874 216 658
59	T. 20N - R. 40E	616 25 591	43 -- 43	659 25 634
295	T. 20N - R. 41E	1,086 195 891	712 60 652	1,798 255 1,543
223	T. 20N - R. 42E	-- -- --	707 20 687	707 20 687
912	T. 19N - R. 39E	491 204 287	498 59 439	989 263 726
378	T. 19N - R. 40E	277 5 272	200 57 143	477 62 415
45	T. 19N - R. 41E	--	--	--
1,324	T. 19N - R. 42E	-- -- --	2,477 739 1,738	2,477 739 1,738
490	T. 18N - R. 39E	-- -- --	1,710 213 1,497	1,710 213 1,497
863	T. 18N - R. 40E	555 247 308	378 96 282	933 343 590
104	T. 18N - R. 41E	144 23 121	466 42 424	610 65 545
307	T. 18N - R. 42E	-- -- --	942 51 891	942 51 891
2,792	T. 18N - R. 43E	395 4 391	-- -- --	395 4 391



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 8:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:	Cropland	Rangeland	-red -green
		Class II	Class III	Total	
290	T. 17N - R. 29E <sup>1</sup> & R. 30E	-- -- --	867 188 679		867 188 679
505	T. 17N - R. 31E	--		--	--
558	T. 17N - R. 32E	--		--	--
941	T. 17N - R. 33E	--		--	--
190	T. 16N - R. 30E	221 120 101	483 10 473	704 130 574	
130	T. 16N - R. 31E	--		--	--
535	T. 16N - R. 32E	--		--	--
866	T. 16N - R. 33E	--		--	--

<sup>1</sup> Acreage includes Sections 1, 12, 13 and 36 from T. 17N - R. 29E and all acreage in T. 17N - R. 30E.



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 9:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:		Cropland - <b>red</b>
		Class II	Class III	Rangeland - <b>green</b>
1,458	T. 17N - R. 34E	181 50 131	1,004 333 671	1,185 383 802
689	T. 17N - R. 35E	299 11 288	64 35 29	363 46 317
408	T. 17N - R. 36E	296 47 249	72 35 37	368 82 286
169	T. 17N - R. 37E	--	--	--
496	T. 16N - R. 34E	-- -- --	698 96 602	698 96 602
656	T. 16N - R. 35E	568 17 551	16 -- 16	584 17 567
116	T. 16N - R. 36E	--	--	--
106	T. 16N - R. 37E	-- -- --	104 -- 104	104 -- 104



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 10:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:		Cropland - <b>red</b>	Rangeland - <b>green</b>
		Class II	Class III	Total	
896	T. 17N - R. 38E	611 <b>175</b> 436	504	1,115 -- 504	<b>175</b> 940
365	T. 17N - R. 39E	--	--	--	--
330	T. 17N - R. 40E	--	--	--	--
372	T. 17N - R. 41E	-- -- --	242 <b>160</b> 82	242 <b>160</b> 82	
699	T. 16N - R. 38E	138 <b>43</b> 95	86	224 -- 86	<b>43</b> 181
560	T. 16N - R. 39E	152 <b>1</b> 151	88	240 -- 88	<b>1</b> 239
2,391	T. 16N - R. 40E	-- -- --	37 <b>37</b> --	37 <b>37</b> --	
5,164	T. 16N - R. 41E	440 <b>147</b> 293	397 <b>22</b> 375	837 <b>169</b> 668	



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 11:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use: Class II	Cropland - red Rangeland - green	Total
911	T. 17N - R. 42E	50 21 29	133 36 97	183 57 126
2,869	T. 17N - R. 43E	232 141 91	2,539 1,149 1,390	2,771 1,290 1,481
4,908	T. 16N - R. 42E	98 78 20	-- -- --	98 78 20
3,001	T. 16N - R. 43E	1,814 873 941	735 43 692	2,549 916 1,633
1,727	T. 16N - R. 44E	--	--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 12:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)			
Total Cropland	Legal Description	Present Use:		Cropland - red	Rangeland - green
		Class II	Class III	Total	
238	T. 15N - R. 30E	--		704	704
		--		85	85
		--		619	619
149	T. 15N - R. 31E	--		--	--
535	T. 15N - R. 32E	--		--	--
1,942	T. 15N - R. 33E	--		--	--
580	T. 15N - R. 34E	312		211	523
		23		--	23
		289		211	500
356	T. 14N - R. 30E	--		702	702
		--		160	160
		--		542	542
--	T. 14N - R. 31E	--		--	--
--	T. 14N - R. 32E	--		--	--
--	T. 14N - R. 33E	--		--	--
--	T. 14N - R. 34E	--		--	--
--	T. 13N - R. 30E	--		475	475
		--		--	--
		--		475	475
--	T. 13N - R. 31E	--		--	--
--	T. 13N - R. 32E	--		--	--
--	T. 13N - R. 33E	--		--	--
--	T. 13N - R. 34E	--		--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 13:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green
	Class II	Class III	Total	
--	T. 15N - R. 35E	232	--	232
		--	--	--
		232	--	232
--	T. 15N - R. 36E	224	187	411
		--	--	--
		224	187	411
--	T. 15N - R. 37E	--	--	--
523	T. 15N - R. 38E	--	--	--
8	T. 15N - R. 39E	--	--	--
501	T. 14N - R. 35E	231	197	428
		--	--	--
		231	198	428
--	T. 14N - R. 36E	--	--	--
--	T. 14N - R. 37E	--	--	--
425	T. 14N - R. 38E	--	--	--
56	T. 14N - R. 39E	--	302	302
		--	--	--
		302	302	302
216	T. 13N - R. 35E	--	--	--
--	T. 13N - R. 36E	--	--	--
--	T. 13N - R. 37E	--	--	--
--	T. 13N - R. 38E	--	--	--
--	T. 13N - R. 39E	--	--	--



ENUMERATIVE DATA FOR GARFIELD COUNTY PLATE 14:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:		Cropland - red	Rangeland - green
		Class II	Class III	Total	
1,146	T. 15N - R. 40E	--	579	579	
		--	185	185	
		--	394	394	
1,380	T. 15N - R. 41E	86	614	700	
		72	21	93	
		14	593	607	
181	T. 15N - R. 42E	--	790	790	
		--	--	--	
		--	790	790	
153	T. 15N - R. 43E	--	402	402	
		--	--	--	
		--	402	402	
2,719	T. 15N - R. 44E	133	--	133	
		75	--	75	
		58	--	58	
--	T. 14N - R. 40E	--	--	--	
3,255	T. 14N - R. 41E	--	1,126	1,126	
		--	1,030	1,030	
		--	96	96	
3,134	T. 14N - R. 42E	--	377	377	
		--	243	243	
		--	134	134	
566	T. 14N - R. 43E	--	--	--	
1,602	T. 14N - R. 44E	--	--	--	
--	T. 13N - R. 40E	--	--	--	
178	T. 13N - R. 41E	--	--	--	
3,783	T. 13N - R. 42E	--	496	496	
		--	348	348	
		--	148	148	
2,696	T. 13N - R. 43E	--	--	--	
3,411	T. 13N - R. 44E	--	88	88	
		--	58	58	
		--	30	30	



MCCONE COUNTY ENUMERATIVE DATA ON  
POTENTIALLY IRRIGATED LAND - PRESENT LAND USE  
FOR ALL 10 SUB-AREAS OF MCCONE COUNTY

Note: In the final report there will be a map or Plate 1 opposite each enumerative data table.

In addition there will also be a set of map plates (2) showing Potentially Irrigable Land and Present Land Ownership.



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 1:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		Potentially Irrigable Land (Acres)			
Total Cropland	Legal Description	Present Use:		Cropland - red	Rangeland - green
		Class II	Class III	Total	
556	T. 27N - R. 41E	757 475 282	22 12 10	779 487 292	
--	T. 27N - R. 42E	--	--	--	--
104	T. 26N - R. 41E	-- -- --	66 5 61	66 5 61	
398	T. 26N - R. 42E	--	--	--	--
1,243	T. 26N - R. 43E	845 613 232	626 143 483	1,471 756 715	
2,841	T. 26N - R. 44E	3,752 2,420 1,332	779 275 504	4,531 2,695 1,836	
1,882	T. 26N - R. 45E	29 10 19	2,619 765 1,854	2,648 775 1,873	
357	T. 25N - R. 42E	--	--	--	--
342	T. 25N - R. 43E	--	--	--	--
4,137	T. 25N - R. 44E	--	--	--	--
3,067	T. 25N - R. 45E	-- -- --	878 357 521	878 357 521	



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 2:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:		Cropland	-red
		Class II	Class III	Rangeland	-green
--	T. 27N - R. 46E	--	--	--	--
2,576	T. 27N - R. 47E	797	3,411	4,208	
		575	1,937	2,512	
		222	1,474	1,696	
2,444	T. 27N - R. 48E	80	2,635	2,715	
		80	1,706	1,786	
		--	929	929	
3,860	T. 27N - R. 49E	197	1,107	1,304	
		115	901	1,016	
		82	206	288	
4,214	T. 27N - R. 50E	2,566	888	3,454	
		1,276	537	1,813	
		1,290	351	1,641	
7,027	T. 26N - R. 46E	330	4,104	4,434	
		238	2,832	3,070	
		92	1,272	1,364	
6,530	T. 26N - R. 47E	443	1,527	1,970	
		199	1,152	1,351	
		244	375	619	
11,929	T. 26N - R. 48E	--	2,856	2,856	
		--	2,387	2,387	
		--	469	469	
10,166	T. 26N - R. 49E	--	3,162	3,162	
		--	1,828	1,828	
		--	1,334	1,334	
9,211	T. 26N - R. 50E	182	2,894	3,076	
		30	2,234	2,264	
		152	660	812	
5,324	T. 25N - R. 46E	--	798	798	
		--	729	729	
		--	69	69	
5,182	T. 25N - R. 47E	--	450	450	
		--	159	159	
		--	291	291	
11,031	T. 25N - R. 48E	--	406	406	
		--	346	346	
		--	60	60	
15,353	T. 25N - R. 49E	--	1,730	1,730	
		--	1,406	1,406	
		--	324	324	
9,532	T. 25N - R. 50E	--	2,950	2,950	
		--	1,848	1,848	
		--	1,102	1,102	



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 3:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:	Cropland - <b>red</b>	Rangeland - <b>green</b>
Class II	Class III	Total		
367	T. 24N - R. 43E	--	--	--
1,274	T. 24N - R. 44E	--	--	--
1,670	T. 24N - R. 45E	29 28 1	998 315 683	1,027 343 684
2,720	T. 24N - R. 46E	48 12 36	203 174 29	251 186 65
2,146	T. 23N - R. 43E	-- -- --	331 166 165	331 166 165
1,214	T. 23N - R. 44E	--	--	--
1,876	T. 23N - R. 45E	627 211 416	206 132 74	833 343 490
2,876	T. 23N - R. 46E	448 235 213	424 251 173	872 486 386



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 4:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)		
Total Cropland	Legal Description	Present Use:		Total
		Class II	Class III	
7,553	T. 24N - R. 47E	341 207 134	488 311 177	829 518 311
11,427	T. 24N - R. 48E	117 38 79	634 249 385	751 287 464
15,326	T. 24N - R. 49E	-- -- --	2,712 2,045 667	2,712 2,045 667
9,907	T. 24N - R. 50E	483 130 353	3,917 2,869 1,048	4,400 2,999 1,401
8,670	T. 23N - R. 47E	-- -- --	532 358 174	532 358 174
15,902	T. 23N - R. 48E	80 48 32	2,485 1,925 560	2,565 1,973 592
16,133	T. 23N - R. 49E	-- -- --	672 581 91	672 581 91



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 5:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)			
Total Cropland	Legal Description	Present Use:		Cropland - red	Rangeland - green
		Class II	Class III	Total	
438	T. 22N - R. 43E	--	--	--	
462	T. 22N - R. 44E	--	--	--	
3,940	T. 22N - R. 45E	1,915 1,527 388	87 71 16	2,002 1,598 404	
2,953	T. 22N - R. 46E	437 284 153	142 70 72	579 354 225	
17	T. 21N - R. 43E	--	--	--	
2,498	T. 21N - R. 44E	-- -- --	464 129 335	464 129 335	
4,601	T. 21N - R. 45E	210 163 47	1,350 1,039 311	1,560 1,202 358	
5,282	T. 21N - R. 46E	162 93 69	153 54 99	315 147 168	



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 6:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)		
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green
		Class II	Class III	Total
15,682	T. 22N - R. 47E	398 358 40	576 437 139	974 795 179
12,246	T. 22N - R. 48E	-- -- --	866 311 555	866 311 555
6,817	T. 22N - R. 49E	-- -- --	781 499 282	781 499 282
15,070	T. 21N - R. 47E	319 214 105	43 -- 43	362 214 148
16,803	T. 21N - R. 48E	-- -- --	810 505 305	810 505 305
8,231	T. 21N - R. 49E	-- -- --	205 141 64	205 141 64



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 7:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)			
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green	Total
Class II	Class III				
270	T. 20N - R. 43E	-- -- --	162 47 115		162 47 115
215	T. 20N - R. 44E	--	--		--
1,181	T. 20N - R. 45E	--	--		--
7,211	T. 20N - R. 46E	272 187 85	387 210 177		659 397 262
240	T. 19N - R. 43E	118 12 106	-- -- --		118 12 106
1,150	T. 19N - R. 44E	739 208 531	-- -- --		739 208 531
3,907	T. 19N - R. 45E	232 232	---		232 232
11,234	T. 19N - R. 46E	67 58 9	715 288 427		782 346 436



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 8:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use: Class II	Cropland - red Rangeland - green	Total
12,763	T. 20N - R. 47E	683 254 429	64 20 44	747 274 473
13,472	T. 20N - R. 48E	218 121 97	1,048 699 349	1,266 820 446
5,931	T. 20N - R. 49E	-- -- --	899 295 604	899 295 604
10,043	T. 19N - R. 47E	229 109 120	72 -- 72	301 109 192
7,836	T. 19N - R. 48E	634 397 237	2,893 1,599 1,294	3,527 1,996 1,531
6,990	T. 19N - R. 49E	312 237 75	779 492 287	1,091 729 362



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 9:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use: Class II	Cropland - red Rangeland - green	Total
2,569	T. 18N - R. 44E	210 33 177	-- -- --	210 33 177
6,705	T. 18N - R. 45E	168 95 91	34 10 24	202 105 115
10,344	T. 18N - R. 46E	-- -- --	1,472 1,056 416	1,472 1,056 416
3,551	T. 17N - R. 45E	82 30 52	-- -- --	82 30 52
7,916	T. 17N - R. 45E	134 67 67	-- -- --	134 67 67
11,879	T. 17N - R. 46E	1,688 1,267 421	2,819 1,698 1,121	4,507 2,965 1,542
9,401	T. 16N - R. 46E	958 723 235	2,279 1,749 530	3,237 2,472 765



ENUMERATIVE DATA FOR MCCONE COUNTY PLATE 10:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>			
Total Cropland	Legal Description	Present Use:		Cropland	-red
		Class II	Class III	Rangeland	-green
8,444	T. 18N - R. 47E	2,208 1,294 914	238 74 164	2,446 1,368 1,078	
5,428	T. 18N - R. 48E	642 434 208	496 224 272	1,138 658 480	
4,219	T. 18N - R. 49E	954 291 663	433 142 291	1,387 433 954	
4,807	T. 17N - R. 47E	360 210 150	854 492 362	1,214 702 512	
4,463	T. 17N - R. 48E	189 119 70	1,389 1,083 306	1,578 1,202 376	
4,811	T. 17N - R. 49E	219 144 75	722 586 136	941 730 211	



DAWSON-RICHLAND COUNTIES ENUMERATIVE DATA ON  
POTENTIALLY IRRIGATED LAND - PRESENT LAND USE  
FOR ALL 4 SUB-AREAS OF DAWSON-RICHLAND COUNTIES

Note: In the final report there will be a map or Plate 1  
opposite each enumerative data table.

In addition there will also be a set of map plates  
(2) showing Potentially Irrigable Land and Present  
Land Ownership.



ENUMERATIVE DATA FOR DAWSON-RICHLAND COUNTIES PLATE 1:1  
 POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use: Class II	Cropland - red	Rangeland - green
NA	T. 28N - R. 53E <sup>1</sup>	--	--	--
NA	T. 27N - R. 51E <sup>1</sup>	--	--	--
NA	T. 27N - R. 52E <sup>1</sup>	-- -	--	--
NA	T. 27N - R. 53E <sup>1</sup>	--	--	--
NA	T. 27N - R. 54E <sup>1</sup>	--	--	--
8,004	T. 26N - R. 51E	-- -- --	1,213 1,148 65	1,213 1,148 65
NA	T. 26N - R. 52E <sup>1</sup>	--	--	--
NA	T. 26N - R. 53E <sup>1</sup>	--	--	--
NA	T. 26N - R. 54E <sup>1</sup>	--	--	--

<sup>1</sup> Data unavailable at time of tabulation.



ENUMERATIVE DATA FOR DAWSON-RICHLAND COUNTIES PLATE 2;1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

Existing Land Use		Potentially Irrigable Land (Acres)			
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green	Total
Class II	Class III				
7,624	T. 25N - R. 51E	-- -- --	1,509 1,261 248		1,509 1,261 248
6,472	T. 25N - R. 52E	99 84 15	291 102 189		390 186 204
8,826	T. 25N - R. 53E	88 15 73	851 607 244		939 622 317
NA	T. 25N - R. 54E <sup>1</sup>	--	--	--	--
3,840	T. 24N - R. 51E	64 64	1,270 892 378		1,334 892 442
4,390	T. 24N - R. 52E	395 282 113	382 205 177		777 487 290
6,963	T. 24N - R. 53E	662 275 387	896 741 155		1,558 1,016 542
11,847	T. 24N - R. 54E	334 280 54	1,837 1,589 248		2,171 1,869 302

<sup>1</sup> Data unavailable at the time of tabulation.



ENUMERATIVE DATA FOR DAWSON-RICHLAND COUNTIES PLATE 3:1  
POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use: Class II	Cropland - red Rangeland - green Class III	Total
9,793	T. 23N - R. 50E	2,531 1,152 1,379	7,026 5,891 1,135	9,557 7,043 2,514
10,331	T. 23N - R. 51E	864 604 260	2,907 2,115 792	3,771 2,719 1,052
7,990	T. 23N - R. 52E	-- -- --	771 612 159	771 612 159
8,697	T. 23N - R. 53E	213 179 34	1,245 1,003 242	1,458 1,182 276
13,096	T. 23N - R. 54E	221 137 84	307 264 43	528 401 127
2,580	T. 22N - R. 50E	3,280 334 2,946	6,013 2,070 3,943	9,293 2,404 6,889
9,093	T. 22N - R. 51E	1,510 992 518	7,042 4,270 2,772	8,552 5,262 3,290
11,312	T. 22N - R. 52E	--	--	--
2,522	T. 22N - R. 53E	64 15 49	1,238 515 723	1,302 530 772
3,315	T. 22N - R. 54E	1,005 675 330	645 317 328	1,650 992 658
6,130	T. 21N - R. 50E	4,011 1,515 2,496	3,455 2,289 1,166	7,466 3,804 3,662
8,121	T. 21N - R. 51E	3,370 1,931 1,439	5,770 3,992 1,778	9,140 5,923 3,217
8,469	T. 21N - R. 52E	--	--	--
3,581	T. 21N - R. 53E <sup>1</sup>	--	--	--

<sup>1</sup> Data for the southwestern area of the township was not available at the time of tabulation. The cropland acreage is from the northwest portion.



ENUMERATIVE DATA FOR DAWSON-RICHLAND COUNTIES PLATE 4:1  
 POTENTIALLY IRRIGABLE LAND & PRESENT LAND USE

<u>Existing Land Use</u>		<u>Potentially Irrigable Land (Acres)</u>		
Total Cropland	Legal Description	Present Use:	Cropland - red	Rangeland - green
		Class II	Class III	Total
3,557	T. 20N - R. 50E	2,075 706 1,369	7,154 2,202 4,952	9,229 2,908 6,321
742	T. 20N - R. 51E	--	--	--
1,779	T. 20N - R. 52E <sup>1</sup>	--	--	--
NA	T. 20N - R. 53E <sup>2</sup>	--	--	--
7,055	T. 19N - R. 50E	1,197 657 540	8,979 5,279 3,700	10,176 5,936 4,240
1,145	T. 19N - R. 51E <sup>1</sup>	--	--	--
NA	T. 19N - R. 52E <sup>2</sup>	--	--	--
3,828	T. 18N - R. 50E	--	--	--
NA	T. 18N - R. 51E <sup>2</sup>	--	--	--

<sup>1</sup> Data for the southwestern area of the township was not available at the time of tabulation. The cropland acreage is from the northwestern portion.

<sup>2</sup> Data unavailable at the time of tabulation.





